ON

BENGAL DYSENTERY

AND

ITS STATISTICS,

WITH

A NOTICE OF THE USE OF LARGE ENEMATA IN THAT DISEASE,

AND OF

QUININE IN REMITTENT FEVER.

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CONTENTS.

PAGE.

NTRODUCTION.

Treatment, ... 1

GENERAL STATISTICS.

Mortality from Dysentery, ... 3
Prevalence of the Disease and Mortality from it, according to season, ... 7

PATHOLOGICAL FACTS.

Preliminary Remarks on Tables, ... 12
Table of Acute Dysentery, ... 13
Summary of Table of Acute Dysentery, ... 34
Table of Chronic Dysentery, ... 35
Summary of Table of Chronic Dysentery, ... 44
On Chusan Dysentery, ... 45
Comparison of Acute and Chronic Dysentery, ... 46
True description of the changes produced by Bengal Dysentery, ... 47
Frequency of complication with disease of Liver, ... 48
On certain appearances mentioned by authors, ... 50
Conclusion, ... 51

NOTES.

On Treatment, ... 52
On Dysentery in Children, ... 53

APPENDIX.

On the use of large Enemata in Dysentery, ... 54
On the use of Quinine in Remittents, ... 57

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To SIMON NICOLSON, Esq., *F.R.C.S.*,
Surgeon of the Presidency General Hospital.

My Dear Sir,—To whom could I with greater propriety present these gleanings from the records of the Institution, with which your name has been so honorably associated for more than a quarter of a century, than to you, even did I not lie under a weight of personal obligation to yourself, which I am proud to acknowledge?

Had the Medical and Physical Society been in existence, or were there now any local Medical Journal, these pages would probably not have appeared in a separate form. Bengal Dysentery has been admirably described by former officers of this Hospital. The present is a slight attempt, but one of the first of its kind, to apply the numerical method to the subject. It is not an exposition of opinions, but a statement of facts, (perhaps too copious in detail,) from which the reader may draw his own conclusions. I have not thought it desirable to expand these materials, as they might easily have been expanded, into a regular treatise.

In the numerical statements it has been found impossible to obtain absolute accuracy, but I have had the advantage of comparing them with some carefully constructed tables of Mr. Hare's, and they are accurate enough for all practical purposes. You will be surprised at the high rate of mortality that has been found to prevail, but if a rigid analysis of cases were made, and if those which were evidently the terminations of other maladies, and those which died within twenty-four hours after admission, were excluded, the mortality would be considerably less.

I should hope, that the short historical notice of the use of enemata in dysentery, and of quinine in remittents, may, at the present time, be of some interest to you and to the profession in this country.

Believe me,
My dear Sir,
Your's very sincerely,
JOHN MACPHERSON.

General Hospital:
May 20*th*, 1850.

ON

BENGAL DYSENTERY.

INTRODUCTION—TREATMENT.

I propose—1st, to give some returns of the mortality from dysentery, and of the diffusion of the disease throughout the year, from the books of the General Hospital, and to make a few comparisons with what is found to occur elsewhere.

2nd, to give an abstract of the pathological appearances presented in 160 cases of acute and in 55 of chronic dysentery, which have occurred during the last nine years.

The symptoms and history of Bengal dysentery have been so fully described by Twining and Raleigh, that it is unnecessary on the present occasion to add any thing to what they have said on those heads: nor do I intend to say more than a few words on the management of the disease. Practitioners seem to have been gradually losing faith in the mercurial treatment, which dates back from the latter half of the last century, and has often been exclusively followed. The virtues of ipecacuanha, also a very old remedy, though they were brought prominently forward by Twining, are not so much trusted to now as formerly. Opium again, which since the days of the liquid laudanum of Sydenham down to the present time, has been more or less used, but which had latterly got the character of masking the disease, seems of late to have regained its rights. In Bengal, Drs. Mackinnon and Goodeve and others have suggested the propriety of returning to a more free use of this drug, and that most sound observer, Dr. Morehead of Bombay, has borne testimony to its value. My own belief is, that the return to a milder and more soothing treatment has been attended with great advantage—though it may be difficult to prove this by reference to any Hospital records within reach. One obvious difficulty in arriving at safe conclusions is, that the disease itself varies so much in intensity in different years, as well as in different periods of the same year.

Thus, H. M. 55th at Secunderabad, lost in 1837. . 1 in 4½
1838. . 1 in 7½
1839. . 1 in 10

yet the treatment was the same, and by the same Medical Officer throughout.

The only data bearing on this point in my possession are afforded by the records of the Seaman's Hospital. Such as they are, they are subjoined, though they must be taken with great reservation—1st, because the number of facts is small—2nd, because it is possible to support by statistical returns almost any pre-conceived notion.

Treatment by bleeding and calomel for five years, ...	227 cases, 48 deaths, or 21 per cent
Treatment by leeching, opium and astringents for three years, ..	80 ,, 10 ,, or 12 per cent.

Still I would not be understood as advocating any exclusive treatment. In an account of the latest Irish epidemic, a most intelligent physician, Dr. Mayne, states—"opium most certainly aggravated the disease." "Mercury must be considered the principal remedy." As the character of dysentery varies, so no doubt should our practice.

I may allude here, as being quite a curiosity in its way, to the most singularly successful mode of treatment that I have seen on record. Mr. Marbot tells us, that in a French vessel on the coast of Zanzibar, he has treated 300 cases of dysentery with aconite and ipecacuanha without a single casualty. Two things seem very plain: first, that Mr. Marbot deceived himself: second, that the disease he treated is something very different from Bengal dysentery.

GENERAL STATISTICS.

MORTALITY FROM DYSENTERY.

1. *Out of Bengal.* It is difficult to procure any accurate statistical data regarding the proportion of deaths to cases treated in Northern Europe, and dysentery does not occur in Major Tulloch's tables of the diseases of troops in Great Britain. Dr. Williams of St. Thomas', however, states, that more than 25 per cent. of cases of chronic dysentery die in the London Hospitals, and says, "in candour it must be allowed, that no class of diseases in them offers so few chances of recovery." In Dublin, Dr. Mayne lost 32 per cent., or omitting cases in old men after the age of 60, as much as 22 per cent.; children under 10 years died at the rate of 65 per cent. At Gemünden, in Southern Germany, where dysentery is often epidemic at the fall of the year, the mortality during the great epidemic of 1834 was 11 per cent. In the Peninsular war, scarcely more than 2 out of 3 recovered. Further South in Malta, which can scarcely be said to have an European climate, the mortality among H. M.'s troops is about 8 per cent.

The accompanying table, compiled from Major Tulloch's reports, shows the percentage of deaths to cases among H. M.'s troops in various parts of the world:

Bermuda,	3.2	Mauritius,	6.0
Nova Scotia,	7.4	Jamaica,	4.3
Canada,	5.0	Windward and Leeward Islands,	7.1
Mediterranean,	4.0		
St. Helena,	10.6	Ceylon,	13.0
Sierra Leone,	18.0	Tenasserim,	8.5
Cape of Good Hope,	4.7	Three Presidencies,	8.3

2. *In Bengal* Major Tulloch gives the mortality of H. M.'s troops at 8 per cent., and Dr. Mackinnon finds, that among the European troops for 7 years at Cawnpore, it was 6.16. In Calcutta and its neighbourhood, the percentage among European troops appears to be rather more than 9 per cent.; but it varies much, for some regiments have suffered much more heavily. Thus, H. M.'s 21st Fusiliers lost in Fort William and Chinsurah, at the rate of 17 per cent.; and H. M.'s 70th, in crowded barracks at Dum-Dum, suffered at the rate of 35 per cent. during the first six months after its arrival from England.

3. In an Institution like the General Hospital, to which patients are often sent in the last stage of disease, and which receives all sick soldiers left behind by their regiments, as well as all sick invalids on their way home, one would naturally expect to find a high rate of mortality. Raleigh gives it as from 10 to 14 per cent., and Martin says, it is 10.27.

But the following table of admissions and deaths during the last 20 years will shew that they have greatly underrated it. The mortality from all "bowel complaints" is about 19 per cent., much higher than the rate assigned by them, but not equal to the reality. Of course the mortality in returns can be made to vary much according as cases are classed under the heads of diarrhœa or dysentery, a point often requiring nice discrimination.

This will be abundantly evident if we contrast the proportion of deaths from bowel complaints, with that from dysentery during the last 16 years, in periods of four years.*

	1834—38.	1838—42.	1842—46.	1846—50.
Bowel complaints, ..	68.6	71.8	70.8	69.
Dysentery, ...	24.3	21.2	25.6	26.3

Thus, while the mortality from dysentery has, on the whole, been increasing, that from all bowel complaints has varied to but a trifling extent.

The following have been the admissions and deaths from dysentery in the General Hospital, from 1830 to 1850:

Year.	Admission.	Deaths.	Year.	Admission.	Deaths.
1830	144	22	1840	68	11
31	128	20	41	172	42
32	124	20	42	147	41
33	128	19	43	88	19
34	147	39	44	141	28
35	71	20	45	91	31
36	55	10	46	87	27
37	54	15	47	78	17
38	52	13	48	87	25
39	78	15	49	94	24

Total admissions 2044, total deaths 457, or 22.3 per cent.

The extremes of mortality have been 14.8 in 1833, and 34. in 1845.

The average is higher than that of the Bombay General Hospital, which, for a period of 5 years, was 18.3, and lower than that of the Madras one, in which, for a period of 10 years, it was 30 among Civilians, though only 5.3 for the Military. The average mortality in a series of years appears to have been almost the same in the Calcutta General and Medical College Hospitals, and the extremes in the latter have been 14.1 and 33.

The mortality in the year 1840 in the General Hospital was 16, in 1849, 25.5, and in the Medical College Hospital at the same periods 25, and 27.

* I have taken a period of 16 years, because in the year 1834 there was a sudden increase of mortality in bowel complaints, which has ever since continued. This was the year of the great Continental epidemics of dysentery, and what is perhaps more to the point, the port of Calcutta began to be crowded with ships, many of an inferior class.

In the table of admissions and deaths, acute and chronic dysentery are classed together: indeed, they cannot be separated with advantage, and their severance in Major Tulloch's tables gives rise to some very strange results. In them chronic dysentery (which is returned as infinitely more fatal than acute) is made to kill in Malta 1 in 4, while in the Mauritius it kills only 1 in 14½, and deaths by acute dysentery are made to vary from 1 in 57 in the Bermudas, to 1 in 2½ in Sierra Leone. There is manifestly some error in such statements.

On analysing the classes, among whom the mortality occured in the General Hospital during the only two years, 1847 and 1849, in which that analysis can be easily made, we find that the mortality of the Military in those years was 10 and 21 per cent., giving a mean of 15½ per cent., which is considerably less than that of the non-military.

It might be expected, that some statement should be given of the average period after the first invasion of the disease, or after admission into Hospital in which death occurs, and it may be stated, that death within a week from the first attack is extremely rare. But patients are so seldom brought to the General Hospital at the commencement of the attack, and the attack itself varies so much according to the prevailing character of the disease, that no such statement would be satisfactory. In like manner, almost all the dysenteric patients being soldiers and sailors, are between the ages of 18 and 40, and the chief mortality is of course between those two periods of life. Most admissions also occur between the ages of 18 and 30, and consequently most deaths.

The number of fatal cases among women is extremely small: for in the following tables of the appearances in 215 dissections, the names of only 5 females are found. I have imagined, that Bengal acute dysentery is peculiarly fatal in boys from 14 to 20 and in middle aged men: boys suffer less from the chronic form. I have been repeatedly astonished to discover after death an immense extent of structural change in boys whose illness could not be ascertained to have exceeded 8 or 10 days.

It may be finally remarked, that about 1-10th of all admissions into the General Hospital are cases of dysentery, and that while 10 to 11.5 per cent. is the average mortality on all admissions, that on dysentery is about 22, cholera and hepatitis alone proving more fatal.

PREVALENCE OF THE DISEASE AND MORTALITY FROM IT, ACCORDING TO SEASON.

I. 1. *Out of India.*—The following are a few notices of the prevalence of the disease, according to season, in Europe. In the Infirmary for children in London, Dr. West found the rate of prevalence of dysentery to be, spring 8.3: summer 13: autumn 24.4: winter 7.2. In the last Dublin epidemic, in the year 1847, the admissions in the Work-house were, 1st quarter 136: 2nd quarter 159: 3rd quarter 206: 4th quarter 157:—and at Grätz, where dysentery is an autumnal disease, the distribution was—

Spring 8 cases: Summer 67: Autumn 163: Winter 11.

2. *In India,* Annesley found on the large scale that out of 13,900 cases which occurred in 5 years in Bengal, 2,400 were in the cold, 4,500 in the hot and dry, and 7,000 in the hot and moist season. This accords with the results in Ceylon among Queen's troops, who have most cases of dysentery in the second and third quarters of the year. In like manner Dr. Mackinnon found at Cawnpore, in a series of 7 years, that dysentery among Europeans was most frequent in the rains, next in the hot weather, least frequent in the cold season, and far most frequent in the months of August and September. The results in the General, the Seaman's, and the Medical College Hospitals, will be found generally similar, although the disease is in Calcutta somewhat more prevalent

in the cold than in the hot weather. These points will be illustrated by the following tables. The prevalence of the disease, according to season, is modified by the climate of the particular place, and we thus find, that in the General Hospital at Bombay, it is said to be most common in the cold season.

Table of Admissions and Deaths from Dysentery in the General Hospital, for 10 *years.*

Months.	1840.		1841.		1842.		1843.		1844.		1845.		1846.		1847.		1848.		1849.		Total Admission.	Total Deaths.	Percentage of Deaths.
	Admitted.	Died.	Admitted.	Died	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.			
Jan...	6	1	14	2	7	1	8	3	10	0	18	3	10	2	6	1	21	4	7	1	107	18	16
Feb...	5	2	7	2	6	2	19	0	5	2	5	0	3	2	6	2	5	1	4	1	61	14	23
Mar. .	6	1	13	3	7	2	8	2	5	2	1	1	1	2	4	2	3	0	4	1	52	17	32.6
April,.	6	0	4	1	4	1	6	1	6	2	2	1	7	1	7	0	7	2	7	1	56	10	14.2
May, .	4	0	13	3	8	3	2	2	5	1	4	0	9	3	8	3	7	1	8	5	66	21	31.8
June, .	1	2	6	3	10	2	6	1	10	7	9	3	3	1	3	1	6	2	5	0	59	22	37
July, .	4	1	21	2	15	3	7	3	13	7	10	5	11	3	8	3	5	2	12	3	106	32	30
Aug. .	6	0	17	7	18	7	6	3	10	1	11	5	7	2	5	0	9	2	10	1	98	28	28
Sept. .	5	1	19	5	25	8	6	0	3	2	4	2	7	3	5	1	9	3	7	4	96	29	30
Oct...	11	0	21	7	10	7	5	0	5	2	5	1	3	1	7	3	8	4	12	3	87	28	32.1
Nov. .	7	1	4	4	25	2	8	2	21	1	8	2	16	2	10	1	4	3	9	2	112	20	17.8
Dec...	7	2	33	3	12	3	7	2	48	1	14	7	10	5	9	0	3	1	9	2	152	26	17
Total,	68	11	172	42	147	41	83	19	141	28	91	29	87	27	78	17	87	25	94	24			
Percentage of Deaths.	16		24.4		27		21.5		20		31.8		30		21.8		28.7		25.5				

The average prevalence of the disease in the different months is fairly enough represented in the foregoing table: if we make a few corrections to allow for the increase of cases caused by the arrival of the invalids of the season in the end of November, and in December and January, the number of cases would stand thus—

January,	75	July,	106
February,	60	August,	98
March,	52	September,	96
April,	56	October,	87
May,	66	November,	82
June,	59	December,	80
1st half of the year,	368	2nd half of the year,	549

or, according to season, in the following proportions: four cold months 74, three hot ones 68, five of rains 88.

The results are nearly the same in the College Hospital.

3. Regarding the degree of prevalence of the disease in different years, nothing of distinct value can be gathered from the Hospital records, because the number of admissions is in great measure dependant on the number and strength of detachments of troops arriving at the Presidency and on the number of shipping lying in the river. Thus the year 1842, in which there were most admissions from bowel complaints, was that of the return of the invalids from Chusan.

II. Regarding the rate of mortality according to season, out of India I possess no data, but if we proceed to investigate the rate of mortality in the General Hospital, we find it to be in this proportion, almost equal in the first and second halves of the year; but according to season, cold weather 18.4: hot weather 26.2: rains 31.4.

The results in the College Hospital are nearly the same. The most fatal months in the General Hospital have been March, May, June, and October, and in the College Hospital May, June, August, September and December. In Ceylon the disease was most fatal in April, May, and June, while at Cawnpore, October and November were the worst months. This comes nearest to Bombay, where the cold season is said to produce most deaths, and the monsoon, or July, August and September, next most.

The information on this point is not very full or satisfactory, but probably for India generally, August, September and October will be found to be the most fatal months, as the fall of the year is in Europe, though perhaps from different causes.

The unusually high mortality in the General Hospital in the month of March, when the prevalence of the disease is smallest, cannot be very readily explained.

Nor can any satisfactory information be given as to the rate of mortality in different years. It was remarked above, that the average mortality in a *series of years* was the same in the General and in the Medical College Hospitals, yet in *individual* years the mortality in the two institutions differed most widely.

Through the kindness of Dr. Mouat, I am enabled to give the following tables of admission and deaths among Europeans and Natives in the Medical College Hospital, during the last 10 years.

Table of Admissions and Deaths of Europeans from Dysentery, in Medical College Hospital.

Months.	1840.		1841.		1842.		1843.		1844.		1845.		1846.		1847.		1848.		1849.		Total Admission.	Total Deaths.	Percentage of Deaths.
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.			
January, ...	8	0	2	0	10	1	3	0	8	0	9	2	9	1	13	4	8	0	12	2	82	12	14.6
February, ...	4	1	1	0	12	2	4	0	10	2	8	1	13	1	11	1	10	2	8	2	81	13	16
March, ...	4	1	5	0	8	2	7	2	10	2	10	0	15	1	10	1	13	0	11	2	93	11	11.8
April, ...	5	0	3	0	9	5	8	1	7	0	14	3	6	2	11	1	16	3	11	1	90	16	17.7
May, ...	4	2	7	2	12	5	9	2	1	1	11	4	9	2	10	1	15	4	13	7	91	30	33
June, ...	4	1	10	2	6	2	11	3	0	0	9	4	6	1	10	0	16	1	13	7	85	24	28
July, ..	4	0	8	3	7	3	13	3	2	0	21	3	18	4	15	2	18	6	16	3	124	27	21.7
August, ...	4	2	9	5	13	4	16	4	5	2	17	4	18	3	12	4	23	4	12	2	129	34	26.2
September, ...	4	2	17	7	6	2	17	4	10	2	16	3	18	2	10	2	14	6	13	3	125	33	26.4
October, ...	7	2	12	3	10	2	14	2	9	1	12	1	16	3	13	3	10	2	11	4	116	23	19.7
November, ...	5	2	7	2	7	3	13	3	11	3	18	2	14	0	11	3	19	1	10	2	127	21	16.7
December, ...	2	1	6	1	12	6	12	7	16	4	24	5	14	2	10	1	17	3	4	1	117	31	26.3
Total, ..	55	14	87	25	112	37	127	31	89	17	169	32	156	22	136	23	179	32	134	36			
Percentage of Deaths ..	25.2		28.7		33.0		24.4		19		19		14.1		17		17 8		27				

Table of Admissions and Deaths of Natives from Dysentery, in the Medical College Hospital.

Months.	1840.		1841.		1842.		1843.		1844.		1845.		1846.		1847.		1848.		1849.		Total Admission.	Total Deaths.	Percentage of Deaths.
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.			
Jany.	5	1	8	1	5	2	5	2	6	1	8	2	8	1	11	1	7	0	6	0	68	11	16
Feby.	5	0	3	2	4	2	3	0	6	1	7	0	6	1	7	1	8	1	9	2	58	10	17
March	3	3	4	0	3	1	5	1	6	2	9	0	8	0	7	1	6	1	5	0	56	9	16
April,	4	1	3	0	2	1	6	2	2	0	8	3	7	1	6	0	7	1	7	1	52	10	19
May,	8	0	5	0	3	1	9	4	4	1	9	0	8	0	7	0	7	0	9	1	69	7	10.1
June,	5	4	6	1	6	0	5	1	5	0	11	0	2	0	4	0	5	0	7	2	56	8	14
July,	6	2	3	1	5	1	3	1	6	2	7	2	7	2	8	0	7	0	7	0	59	11	18.6
Augt.	7	2	6	0	6	1	8	2	10	1	8	1	4	2	12	4	6	1	6	2	73	16	21.9
Septr.	5	2	4	1	5	1	4	2	7	2	8	0	6	0	4	0	11	0	9	0	63	8	12.6
Octr.	4	0	3	0	3	1	6	1	9	1	5	1	9	2	9	2	7	0	5	0	60	8	13.3
Novr.	4	3	4	1	5	1	7	2	7	1	8	1	4	0	10	0	8	2	3	1	60	12	20
Decr.	4	2	2	0	3	0	9	0	10	2	8	2	8	1	7	1	8	2	2	0	61	10	16.2
Total,	60	20	51	7	50	12	70	18	78	14	96	12	77	10	92	10	87	8	75	9			
Percentage of Deaths.	33		13.7		24		25.6		18		12.4		13		10.8		9.2		12				

Though it is foreign to the object of these pages to treat of dysentery among Natives, it is worthy of remark, how uniform the rate of admission among them seems to be throughout the year. Though they do not vary much, the admissions are most numerous in August and in May, while the mortality is highest in August, and next highest in November. The general results are much the same as with Europeans.

The average mortality among Natives has been 16.9, that among Europeans 22.5. This accords with general experience, which has shown the disease in Natives to be more amenable to treatment than in Europeans.

PATHOLOGICAL FACTS.

PRELIMINARY REMARKS ON TABLES.

The following tables exhibit a true representation of the structural changes commonly effected by fatal Bengal dysentery. Cases complicated with pthisis, syphilis, or any other constitutional taint, have been, as far as possible, excluded,—(and here I cannot help remarking, how strange it seems that Rokitansky should have asserted the antagonism of phthisis and dysentery, which in this place so commonly occur together.) An abstract is given of the pathological appearances in all cases which are at all fully recorded in the Hospital books, so that the reader may draw his own conclusions from them. A few results only have been noted, but every opinion of a theoretical nature is studiously avoided. On going over the records of these cases it is impossible not to be struck with the fact, that no two observers saw with the same eyes. Thus one gentleman has invariably found the mesenteric glands enlarged, while another describes the liver as dry in one half of the cases in which he mentions its condition. Where there has been no notice of the state of a particular organ, the space is left blank. In such cases its condition may be presumed not to have differed widely from the normal one. In the column of remarks any striking variation from the usual symptoms is noted.

ACUTE DYSENTERY.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
1.	Cœcum and colon in a sloughing state throughout.	.. ..	Cicatrix of ulcer on lower surface of right lobe: bands of adhesion.	.. ..	Seaman—died in 3 weeks.
2.	Cœcum ulcerated and sloughing, firmly tied to omentum: ulcers in transverse arch and sigmoid flexure of colon.	Stomach natural.	Liver natural.	.. ..	Seaman, ætat 42—died in 20 days.
3.	Cœcum slightly injected, one or two small points of ulceration: these increased in the transverse arch and sigmoid flexure. Rectum one mass of ulceration.	Small intestine healthy.	Liver healthy. Gall-bladder with healthy bile.	.. ..	Soldier caught dysentery from sleeping on deck—died in 20 days.
6.	Spotted ulceration of large intestine, increasing as it went downwards: internal ulceration, not perceptible outside.	Small intestine distended.	Liver large, pale and soft. Gall-bladder flaccid: a little yellow pale fluid.	Effusion into mesentery.	Engineer—died in 10 days.
7.	Slight partial ulceration of cœcum. General ulceration of lower portion of large intestine.	Healthy.	Liver large and pale. Gall-bladder distended.	.. ..	Townsman—died in 15 days after 1st attack.
8.	Ulceration of large intestines.	.. ..	A hepatic abscess.	.. ..	European Seaman—whole illness 12 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	**Remarks.**
9.	Much ulceration of large intestines.	.. ..	Liver enormously enlarged.	.. ..	European from house of correction—died in 31 days.
10.	Cœcum and transverse colon healthy : mucous coat of the descending down to rectum, ulcerated and sloughing.	.. ..	.. ..	.. ..	Seaman—died in 21 days.
11.	Much ulceration at cœcum and sigmoid flexure, coats thickened and easily torn.	.. ..	Liver much enlarged: abscess in right lobe. Gall-bladder half full of greenish thin bile, ducts pervious.	.. ..	Seaman—died in 13 days.
12.	Cœcum in state of mortification, transverse coat and sigmoid flexure covered with minute ulcers.	.. ..	Liver large. Gall-bladder full of dark bile.	.. ..	Seaman—died in 22 days.
13.	Large intestine congested, mucous membrane sloughing : large coagulum in colon.	.. ..	Liver large and gorged.	Mesenteric glands enlarged and indurated.	Seaman—ill a few days : doing well—suddenly passed a quantity of blood and died.
14.	Mucous surface of whole large intestines sloughing.	.. ..	Liver large and mottled. Gall-bladder full.	.. ..	Boy of 14—ill three weeks.
15.	Cœcum in sloughy state, distended with large coagulum of blood : colon inflamed and ulcerated.	.. ..	Liver enlarged, pale—abscess in posterior portion of right lobe.	.. ..	Seaman from house of correction—ill say a fortnight—died suddenly after passing a quantity of blood.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
16.	Extensive ulceration of cœcum and throughout colon.	Distended.	.. ..	.. ..	Seaman—died in a fortnight.
17.	Ditto.	.. ..	Small abscess, size of a walnut, on lower surface of liver.	.. ..	Seaman—died in 3 weeks.
18.	Ditto, and cœcum perforated.	.. ..	.. ..	.. ..	Seaman, intemperate—died in 8 days.
19.	General ulceration of cœcum and colon.	.. ..	.. ..	.. ..	Sailor—ill nearly 6 weeks.
20.	Old disease of cœcum—ulceration of whole colon and rectum.	Healthy.	Healthy. ..	Healthy. ..	Old Seaman: only 14 days' illness.
21.	Whole large intestine, especially cœcum, in sloughing state.	.. ..	.. ..	.. ..	Cook—ill some weeks.
22.	Do. do., with adhesions to peritoneum.	.. ..	.. ..	.. ..	African Seaman—died in 18 days.
23.	Large intestine inflamed and ulcerated throughout. Cœcum perforated in various places, containing pus.	Healthy.	Liver much enlarged.	.. ..	Sailor, got dysentery in hospital—died in a fortnight.
24.	Sloughing of valve of cœcum. Colon thickened, ulcerated and cartilaginous.	Inflammatory blush on internal surface of stomach: small intestines little affected.	.. ..	.. ..	Seaman—had recovered from cholera—ill 10 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
25.	Ulceration of cœcum and transverse colon.	.. ..	Small abscess.	.. ..	Old Seaman—10 days in hospital.
26.	Cœcum and colon ulcerated throughout.	Small intestines here and there ulcerated.	Abscess, size of walnut, in right lobe.	.. ..	Seaman—27 days ill.
27.	Colon inflamed and ulcerated throughout: in some places perforated.	Healthy.	Liver rather pale.	.. ..	Had been treated for same complaint in previous month—died in 9 days: passed large quantity of blood.
28.	Whole intestine in right iliac region matted together. Cœcum ruptured.	.. ..	Liver much enlarged: 3 abscesses, one in right lobe containing 3℥j of pus.	.. ..	African—ill 5 weeks.
29.	Cœcum thickened and sloughing: lower intestines ulcerated but less so.	Healthy.	Healthy. Gall-bladder distended.	Inflammation of peritoneum and tying down of omentum.	Seaman—died in 17 days.
30.	Intestines dark outside; internally covered with dark grumous blood: when wiped off, mucous membrane pale and bloodless. Cœcum thickened and ulcerated.	White and bloodless.	Liver enlarged and pale.	.. ..	Seaman—died in 28 days: stools bloody.
31.	Cœcum disorganized and ulceration of colon.	.. ..	.. ..	.. ..	Seaman—died in 20 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
32.	Large intestine ulcerated and sloughy throughout.	Small intestines in several places inflamed.	Liver somewhat large.	.. ..	Seaman—died in 22 days: had diarrhœa before.
33.	Ulceration of large intestines, especially towards rectum.	.. ..	Congested. ..	.. ..	Seaman—died in 10 days.
34.	Cœcum semi-cartilaginous, perforated and full of pus, colon dark and ulcerated throughout.	.. ..	.. ..	.. ..	Seaman—died in 9 days: lately had cholera.
35.	General ulceration throughout large intestine.	.. ..	.. ..	.. ..	Seaman, ætat 36—died in 10 days.
36.	Cœcum and colon thickened, ulcerated, sloughing.	.. ..	An immense abscess of liver.	.. ..	Young Seaman—died in 26 days.
37.	Large intestines thickened and ulcerated throughout.	Healthy.	Large and soft.	.. ..	Ætat 54—died in 19 days.
38.	Large intestine ulcerated throughout, chiefly in arch of colon.	.. ..	.. ..	Abscess of right kidney.	Recruit—died in 17 days.
39.	Great thickening of large intestine, with occasional spots of ecchymosis.	.. ..	Liver large, pale and hard.	Kidneys pale and soft: some effusion at neck of bladder.	Seaman, age 18: ill about a month: passed bloody urine.
40.	Ulceration and sloughing state of cœcum extending along the colon.	.. ..	.. ..	.. ..	Midshipman, ætat 14—died in 20 days.
41.	Cœcum and colon thickened and ulcerated throughout.	Blush on small intestines.	.. ..	Mesentery injected, mesenteric glands enlarged.	Seaman, ætat 23—died in 20 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
42.	Cœcum much ulcerated.	.. ..	.. ..	.. ..	Young European woman, much retching of coffee ground substance, and blood passed by stool.
43.	Large intestine, especially cœcum, a mass of ulceration. Ulcers varying from size of half crown to sixpence.	.. ..	Liver large: gall-bladder empty.	Spleen large.	Recruit—died in 13 days.
44.	Large intestine thickened, ulcerated, and indurated throughout.	Stomach little affected.	Liver large, gall-bladder distended, with tarry bile.	Glands enlarged: spleen much enlarged.	Drummer: ætat 15—died in 22 days.
45.	Large intestines ulcerated in parts throughout.	.. ..	Five small abscesses in liver.	.. ..	Young Seaman—died in 34 days.
46.	Cœcum and colon greatly ulcerated—arch and descending colon little so.	.. ..	.. ..	.. ..	Seaman, ætat 22—died in 29 days.
47.	Ulceration throughout the large intestines, and perforation.	.. ..	Gall-bladder adhering to large intestine.	.. ..	Seaman—died in 3 weeks.
48.	Large intestines thickened, ulcerated and covered with curdy matter.	Lower half of ileum livid externally, vascular internally.	Liver pale and enlarged.	.. ..	West Indian—died in 12 days.
49.	Cœcum and neighbouring parts one mass of corruption: perforated.	Healthy.	Healthy. ..	.. ..	Seaman—died in 3 months.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
50.	Cœcum and the rest of large intestine one mass of disease.	.. ..	Healthy. ..	.. ..	Young man: ill 15 days.
51.	Large intestines immensely thickened, ulcerated and perforated.	Healthy.	Healthy. ..	.. ..	Recruit—died in 13 days.
52.	Cœcum and colon ulcerated throughout, and a pint of muddy fluid in abdomen from perforation of cœcum.	.. ..	Liver very large, pushing up the diaphragm.	Glands hard and matted together.	Ætat 34—ill nearly two months.
53.	Large intestine ulcerated throughout.	.. ..	.. ..	.. ..	Seaman—died in a fortnight.
54.	Large intestines ulcerated with fungous excrescences and lined with grumous matter throughout.	Small intestines discolored and vascular.	.. ..	Mesentery discolored and vascular.	Female—died in 8 days: had phrenitis and vomiting: stools tarry.
55.	Scirrhous thickening of transverse and descending colon and rectum. Calibre of rectum would scarcely admit a finger: whole surface studded with fungous growths.	.. ..	.. ..	.. ..	Old Soldier—died in 21 days.
56.	Large intestines ulcerated throughout in patches of irregular shape: contained bloody fluid and mucus.	Healthy.	Liver pale. Gall-bladder distended.	.. ..	Recruit: ill about 40 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
57.	The whole large intestines ulcerated and sloughing, contracted in parts.	.. ..	Liver natural in size, with cicatrices on surface : gall-bladder with healthy bile.	Glands enlarged.	Young stout man—died in 2 months.
58.	Whole large intestines ulcerated and sloughing : ileo-colic valve ulcerated.	.. ..	Liver healthy. Gall-bladder full.	.. ..	Ill 15 days.
59.	Large intestines one mass of disease.	.. ..	Liver large, reddish flush on convex surface : gall bladder not distended.	.. ..	Ætat 26—died in 10 days.
60.	Whole disease of intestines slight, except at cœcum.	.. ..	Liver large, soft. Gall-bladder distended : duct pervious.	Mesentery injected.	Ætat38—died in 12 days.
61.	Large intestines greatly altered, in some places very thin: chief seat of disease sigmoid flexure. Folds of transverse colon ulcerated.	Small intestines healthy.	A large and a small abscess of left lobe : small abscess of right lobe.	Meso-colon injected.	Pauper, ætat 30—died in 21 days.
62.	Cœcum and large intestines ulcerated throughout.	.. ..	.. ..	.. ..	Ætat14—died in 36 days.
63.	Large intestines one mass of disease.	.. ..	.. ..	.. ..	Ætat20—died in 4 weeks.
64.	Do. cœcum perforated.	.. ..	.. ..	.. ..	Ætat 20,—ill 1 month.
65.	Large intestines diseased throughout, especially cœcum.	Small intestines generally healthy.	Liver, soft : a large and a small abscess in left lobe : gall-bladder half full.	Glands enlarged.	Seaman, ætat 32—died in a month.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
66.	Effusion of coagulable lymph on upper and outer surface : ulceration of ileo-colic valve. Large intestines diseased throughout : appearance here and there of a deposit of degenerated tubercular matter in the submucous tissue.	Omentum tied down to small intestines.	Liver healthy : effusion of coagulable lymph on lower surface.	.. ..	Old Seaman—died in 21 days.
67.	Generally ulcerated, especially the rectum.	.. ..	Liver large with marks of old disease.	Glands enlarged.	Seaman, ætat 35—died in a month.
68.	Large intestines ulcerated throughout.	.. ..	.. ..	.. ..	Seaman, ætat 27—ill a fortnight.
69.	Ditto.	.. ..	.. ..	.. ..	Seaman, ætat 25—ill 1 month.
70.	Ditto. Sigmoid flexure perforated.	.. ..	Liver healthy.	Glands enlarged.	Chief officer—died in 3 weeks.
71.	Highly diseased state : bowels breaking down under the fingers.	.. ..	.. ..	.. ..	Seaman—died in 6 days : motions nearly pure blood.
72.	Generally ulcerated.	Small intestines healthy.	Liver large, hard and mottled.	Glands very large and hard.	Boy—died in 5 weeks: tubercles in lungs. Was a hard liver.
73.	Villous coat of large intestine red, and getting of deeper colour downwards: small ulcers at rectum of irregularly circular form, and rectum greatly thickened. Disease almost confined to rectum.	Healthy.	Healthy. ..	Healthy. ..	Seaman, ætat 33—died in 20 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
74.	Thickened, indurated and sloughing.	.. ..	Pale and soft, slightly granular.	.. ..	Pensioner, æt. 54—died in 18 days.
75.	Diseased throughout, with much ulceration, but chiefly at rectum, where much thickened : ulceration least in cœcum : villous coat destroyed and surface rough.	1½ foot of ileum had villous coat injected.	Liver healthy, adhesion to colon. Gall-bladder small, lined outside with rough false membrane.	.. ..	Ill 14 days.
76.	Thickened and ulcerated, also covered with sloughs and coagula: latter chiefly in cœcum.	Pale and bloodless.	Liver pale and enlarged. Gall-bladder inordinately full of dark bile.	.. ..	Seaman, ætat 37—died in 4 or 5 days : passed much blood.
77.	Irregularly shaped ulcers throughout, especially at the sigmoid flexure : intestine much thickened, contained a great quantity of bloody fluid, and at the cœcum was friable.	Healthy.	Healthy. ..	.. ..	Seaman, in hospital 3 days ; ill 3 weeks on board ship. Immense hemorrhage.
78.	Ulceration of rectum and also of cœcum, rest comparatively free from it : colon of dull purple colour.	For a few inches dull vascularity.	Liver somewhat larger than usual : five abscesses, one had about 3 ozs. of curdy pus.	.. ..	Seaman, ill 3 weeks, in hospital 2 days : immense stools of blood.
79.	Ulcers occupying nearly whole calibre of intestine : worst at cœcum, right and left turns of intestine and sigmoid flexure, entirely destroying the villous coat, and in some places, the muscular, and leaving only the peritoneal, which gave way on being handled.	Healthy.	Healthy. ..	Omentum of dull pink colour, and adhering to cœcum.	Stout man, ill a fortnight, 8 days in hospital. Bloody motions.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
80.	Large intestines ulcerated and thickened throughout, chiefly in transverse colon.	.. ..	Small abscess in left lobe.	Spleen enlarged.	Seaman, ætat 25—died in 10 days.
81.	Ulcerated throughout.	.. ..	Liver large, soft and pale.	Omentum inflamed.	Seaman, ætat 18—died in 20 days. Bloody stools.
82.	Suppurating ulcers chiefly at arch of colon.	.. ..	Liver pale and granular.	.. ..	Seaman, ætat 16—died in 3 weeks.
83.	Cœcum and descending colon thickened and ulcerated: rectum in state of slough.	Slight adhesions between the convolutions of small intestine.	Liver pale. ..	Omentum vascular.	Seaman—died in a fortnight.
84.	Large intestine gangrenous and ulcerated throughout: whole one sloughy mass: every where covered with ash coloured sloughs.	Healthy.	.. ..	.. ..	Attack succeeded jungle fever—died in 5 weeks.
85.	Cœcum and colon, as far as sigmoid, thickened and cartilaginous—internal surface one continuous sloughing ulcer.	.. ..	Liver very large and mottled: rather pale.	.. ..	8 days in hospital—ill some weeks.
86.	Colon dilated to a diameter of 4 or 5 inches: cœcum a mass of ulceration and thickening, but no ulceration of rectum.	.. ..	Liver small, pale, yellow, dry, and granular.	.. ..	Old Seaman, ill 10 days: 3 in hospital.
87.	Cœcum sloughing, intestines, ulcerated and cartilaginous throughout.	.. ..	Healthy. ..	.. ..	Seaman, ætat 29—died in 5 or 6 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
88.	Large intestines in state of slough throughout.	.. ..	Surface of liver shewed recent cicatrices: extensive abscess of right lobe.	.. ..	Seaman, ætat 26—ill a month.
89.	Large intestines lined with ulcers, some of them apparently healing: coats perforated in several places.	.. ..	Liver hard and granular, with some tubercles. Gall-duct obstructed and gall-bladder full.	Lungs tubercular: some effusion into chest.	Old man,—ill for one month before death.
90.	Intestines at most depending point in state of slough: rectum thickened and ulcerated.	.. ..	Liver small and turgid.	Spleen slightly enlarged.	Ætat 67—died in 12 days: had immense hernia.
91.	Large intestines thickened, ulcerated and lined with sloughs throughout.	.. ..	Liver small and softened: small abscess.	.. ..	Seaman, ætat 30—died in 17 days.
92.	Large intestines lined with fungous growth, thickened, especially near rectum.	.. ..	Liver pale, granular and soft.	.. ..	Soldier, ill about 10 days.
93.	Colon, purple spots outside—inside mass of ulceration and thickening with lichenoid granulations.	Healthy.	Healthy. ..	.. ..	Seaman—died in 8 days, but had just been discharged from hospital cured of dysentery.
94.	Mass of ulceration and thickening of cœcum, gave way on being handled —in sigmoid flexure and rectum less disease.	Healthy.	Liver one small abscess, size of nutmeg, otherwise healthy.	.. ..	Ill 20 days—ætat 54.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	Remarks.
95.	Universal ulceration of large intestine, which broke down under fingers.	Healthy.	Liver enlarged: nutmeg.	.. ..	Old pensioner: ætat 46, ill for 32 days.
96.	Cœcum, ascending and transverse colon thickened, cartilaginous and ulcerated.	.. ..	Liver somewhat soft.	.. ..	Townsman, ætat 33, ill 3 weeks.
97.	Cœcum and colon thickened: full of suppurating ulcers.	Intestines floating in yellow serum.	Liver granular and dark: considerable abscess in left lobe.	.. ..	Pauper—ill 12 days.
98.	Ditto...	.. ..	Liver large and soft: left lobe pale.	.. ..	Seaman, ætat 33, ill for 18 days.
99.	Cœcum and colon tough, and ulcerated throughout, rectum on the point of sloughing en masse.	.. ..	Liver hard, granular, and almost white.	.. ..	Pensioner, ætat 50—died in a fortnight.
100.	Large intestine mass of phagedœnic ulcers.	.. ..	Liver large and pale.	.. ..	Townsman, ætat 24—ill say 3 weeks.
101.	Large intestine ulcerated throughout: colon almost in state of decomposition.	.. ..	Healthy. ..	.. ..	Boatswain, ætat 45—ill 15 days.
102.	Ditto ditto, lower intestines less affected: no coagula in bowels.	.. ..	Healthy. ..	.. ..	Seaman, ætat 31—died in 15 days. Immense quantity of blood in stools.
103.	Ditto ditto, ulcerated throughout.	.. ..	Liver pale and small.	Spleen large.	Stout: ætat 42—ill 17 days.
104.	Cœcum and ascending colon a mass of sloughing ulceration.	.. ..	Ditto... ..	.. ..	Ætat 31—ill 12 days.

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105.	Colon and whole of the large intestine full of cicatrised ulcers : very few in a state of active ulceration.	Small intestines in many places injected and red : slight abrasion of mucous surface.	Healthy. ..	Spleen and pancreas healthy.	Seaman, ætat 17—died in 31 days.
106.	A good deal of detached ulceration along the colon, but no great extent of it : coats of intestines not thickened.	Healthy.	Mottled. ..	.. ..	Seaman, ætat 42, ill 3 weeks—stools chiefly of bloody washings.
107.	Cœcum much thickened and ulcerated, with imperfect granulations : colon, few superficial ulcers.	Small intestines and stomach blanched: patches of red on inner side of stomach.	Liver a little enlarged and full of abscesses, from size of pea to that of nutmeg, especially on upper surface of right lobe.	.. ..	Recruit, ætat 23, ill at Dum-Dum—died 5 days after admission.
108.	Large intestines enormously ulcerated throughout and filled with coagula.	.. ..	Liver dark, mottled and granular.	.. ..	Invalid Artillery man—ætat 21, ill for 11 days.
109.	Extensive and deep ulcers throughout cœcum and colon—transverse and descending colon somewhat contracted.	Healthy.	Healthy. ..	Many glands enlarged.	Soldier, ætat 39 : ill six weeks—stools bloody.
110.	Large intestines thickened and ulcerated throughout—sloughy.	Several patches of inflammation in small intestines.	Liver large and scirrhous, and adhering to diaphragm.	Spleen and kidney healthy.	Ætat 27, ill six weeks.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
111.	No perceptible lesion.	Intestine near the cœcum a mere web, and destitute of mucous membrane.	Liver, contained an immense abscess.	.. ..	Ætat 18, ill 45 days: passed 12 or 14 inches of thickened mucous membrane 3 days before death.
112.	Arch of colon a mass of ulceration.	.. ..	.. ..	.. ..	Seaman, ætat 24—ill 15 days: stools dark putrid blood.
113.	Patches of inflammation in colon and incipient ulceration.	Healthy.	Healthy. ..	2 pints serum in abdominal cavity.	Pensioner, ætat 40—died in 12 days: pulse hard.
114.	Large intestines much attenuated: cœcum and ascending colon exhibited large black patches ulcerating.	.. ..	Small, soft, flabby and pale.	Mesentery very vascular: spleen healthy.	H. C. M. ætat 19—57 days ill: recovered but got relapse after fever chronic.
115.	Superficial ulceration throughout whole extent, not much thickening, ulcers like abrasions.	Healthy.	Healthy. ..	.. ..	Ætat 28—struck by lightning: ill a fortnight: doing well: got attack of cholera— recovered. Dysentery returned—died in 40 days.
116.	Externally congested: internally of reddish hue throughout, thickly studded with small red spots: no ulceration or thickening but sort of superficial abrasion.	Small intestines vascular, innner surface in many places congested.	Healthy. ..	.. ..	Midshipman, ætat 17—died in 7 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
117.	Mass of corruption breaking down under the fingers.	.. ..	.. ..	.. ..	Attacked in hospital—died in 7 days —ætat 45.
118.	Large intestines a good deal thickened and ulcerated, especially inferiorly, but to no very great extent.	Healthy.	Liver small. ..	.. ..	Seaman, ætat 30—died in 35 days.
119.	Intestine thickened and ulcerated throughout, lined with mucous and bloody coagula.	.. ..	Liver rather large and pale.	.. ..	Seaman, ætat 18—died in 34 days.
120.	Rectum and sigmoid flexure in state of irritable ulceration.	.. ..	.. ..	Some fluid effused in pelvis.	Soldier, ætat 21—died in 5 days, complicated with scorbutus and fever.
121.	Cœcum and sigmoid flexure thickened, ulcerated and breaking under fingers.	Small intestines slightly glued together, lower portion filled with dark brown fluid.	Liver rather large and soft.	Spleen large.	Soldier, ætat 25—died in 17 days: stools pure blood, mixed with mucus.
122.	Upper part of colon and cœcum in state of sphacelus.	Lower part of ileum in state of sphacelus.	Liver enlarged, granular, grey degeneration.	.. ..	Pensioner, ætat 44—ill 40 days.
123.	Cœcum distended with clots of blood, much effused blood along the whole course of colon.	Rather blanched but quite healthy internally.	Nutmeg liver.	.. ..	French Sailor —ætat 24: 11 days in hospital.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
124.	Ulcerated and thickened throughout caput coli: cœcum studded with large unorganized projections from ulcerated base: ulcers in every stage: whole rectum raw and abraded. Appendix vermiformis very long, full of sanious fluid.	.. ..	.. ..	.. ..	Seaman, ætat 24—died in 3 weeks.
125.	Large sloughy ulcers in cœcum, less in transverse arch, but bowel in sloughy state throughout.	Small intestines inflamed and partially agglutinated together.	Liver granular, more like lung than liver. Gall-bladder small, with inspissated bile.	Mesentery much inflamed.	Seaman, ætat 24—died in 14 days: 2 days in hospital.
126.	Cœcum and transverse colon ulcerated and sloughy.	Ileum inflamed.	Liver gorged.	Mesentery and meso-colon inflamed: right iliac fossa a bath of blood and inflammation.	Seaman, ætat 27—died in 11 days.
127.	Large intestines mass of ulceration and sloughing.	Stomach healthy: small intestines in places discoloured.	Liver nutmeg.	Mesentery healthy: spleen healthy.	Ætat 24—died in 20 days.
128.	Externally dark, internally purple, with more or less abrasion, scarcely amounting to ulceration: transverse colon and rectum much affected: no clots of blood.	Small intestines dark and congested: some superficial abrasion.	.. ..	Veins of mesentery turgid, with dark blood.	Seaman, ætat 19—died in 18 days: motions bloody.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
129.	Colon much thickened and ulcerated throughout.	Mucous coat of stomach red and abraded.	Healthy. ..	Healthy. ..	Seaman, ætat 41—ill 8 days—in hospital 6 hours.
130.	Large intestines purple, with ulcerations throughout, breaking down under the fingers.	Healthy.	Healthy. ..	Healthy. ..	Ætat 31—died in 11 days.
131.	Extensive ulceration of large intestine, especially cœcum.	Red blush externally, but internal coat healthy.	Healthy. ..	.. ..	Seaman, ætat 22—died in 26 days.
132.	Thickened and ulcerated throughout with black spots as from hæmorrhage.	Healthy.	Healthy. ..	.. ..	Ætat 38—died in 3 weeks : passed much blood.
133.	Large intestines ulcerated throughout, towards rectum frequent bloody patches, and the last part of the gut sloughing.	Healthy.	Healthy. ..	.. ..	Soldier, ætat 24—died in 3 weeks : rectum especially affected.
134.	Externally dark purple, ulcerated throughout.	Small intestines dark outside : mucous membrane dark red, inclined to ulcerate.	Healthy. ..	.. ..	Seaman, ætat 22—died in 16 days : small intestines more than usually affected.
135.	Cœcum and rectum ulcerated, former lined with coagula.	.. ..	.. ..	Spleen large.	Ætat 26—died in a month.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	Remarks.
136.	Cœcum distended.	.. ..	.. ..	.. ..	Old man—died in three weeks.
137.	Large intestines in sloughy state.	.. ..	Granular. ..	.. ..	Ill about a month, ætat 32.
138.	Cœcum and colon lined with slough.	.. ..	Small, yellow and granular.	.. ..	Pensioner, ætat 44, ill 18 days.
139.	In cœcum much ulceration, less in ascending colon: transverse free from ulcers, a few in sigmoid: ulcers looked indolent: villous coat puckered round them as if going to cicatrise.	Nothing abnormal.	Liver enlarged, adhering throughout to diaphragm: structure loose and friable: abscess containing 4 ℥ of sanious pus. Gall-bladder full of bile.	.. ..	Ætat 36: dysentery came on 5 weeks before, after fever.
140.	Large intestine one continued ulcer.	.. ..	Liver large, pale and dry.	.. ..	Ætat 26—died in 7 weeks.
141.	Large intestines ditto.	Small intestines in parts of dark purple colour.	Rather large but healthy.	.. ..	Æt. 27, about 40 days. Odd nervous symptoms.
142.	Cœcum thickened, cartilaginous and studded with small perforating ulcers.	6 inches of small intestines thickened, &c.	Pale, yellow, large, hard and granular.	.. ..	Invalid: ill 16 days.
143.	Ulceration throughout large intestines.	.. ..	Liver pale, yellow and granular.	.. ..	Died in three weeks.
144.	Large intestine ulcerated, but to no great extent.	Healthy.	Slightly hardened: right lobe had 2 small abscesses: one healthy, one of sanious pus.	.. ..	Pensioner, ætat 41—died in a month.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
145.	Ulceration of large intestines throughout.	Healthy	Healthy. ..	.. ..	Engineer, ætat 28—ill a month.
146.	Ditto.	Ditto. ..	Ditto. ..	.. ..	Pauper, ætat 28, ditto.
147.	Large intestines thickened and ulcerated throughout.	Healthy.	Healthy. ..	.. ..	Seaman, ætat 26—died in 11 days: stools like coffee grounds.
148.	Considerable ulceration of large intestine: mucous membrane in places destroyed.	Ditto. ..	Ditto. ..	.. ..	Ætat 24, ill about 14 days.
149.	Thickening and ulceration of large intestine, and especially rectum, which broke down on handling.	Ditto. ..	Ditto. ..	Vascularity and enlargement of glands.	Midshipman, ætat 16, ill 12 days.
150.	Ulceration throughout whole extent: whole surface rough and covered with whitish-yellow lichenoid substance, which could scarcely be detached.	.. ..	Ditto. ..	.. ..	Pauper, ætat 43, recovered from jungle fever: ill a month.
151.	Extensive ulceration: coats thickened and friable.	.. ..	.. ..	.. ..	Soldier, ætat 26—died in 3 weeks.
152.	Thickened throughout with numerous small ulcers.	Inner coat of stomach injected.	.. ..	.. ..	Soldier, ætat 20—died in 10 days.

No.	*State of large Intestines.*	*State of small Intestines.*	*State of Liver and Gall-bladder.*	*State of Mesentery, Mesenteric glands or other organs.*	REMARKS.
153.	General oozing of blood from mucous surface throughout its whole extent: collections of blood in rectum and cœcum, latter had a few deep ulcers, no general ulceration.	Healthy.	Healthy. ..	.. ..	Ætat 25—died in 16 days from active hæmorrhage: bled from nose and lungs.
154.	Ulcerated throughout: cœcum in state of sphacelus.	Ditto. ..	Ditto. ..	.. ..	Soldier, ætat 28, ill 20 days.
155.	Generally ulcerated.	.. ..	Pale. ..	.. ..	Woman, ætat 38—died in 5 weeks.
156.	Ulcerations chiefly of cœcum and rectum: ulcers distinct, separate and large, not much thickening.	.. ..	Healthy: one or two yellow discoloration on upper surface.	.. ..	Seaman, ætat 22—died in 15 days.
157.	Much ulcerated and thickened throughout.	.. ..	Liver yellow.	.. ..	Midshipman, ætat 18, ill 3 weeks.
158.	One mass of thickening and ulceration throughout.	Rather pale.	.. ..	.. ..	Ætat 15, ill 30 to 40 days.
159.	Large intestines one mass of ulceration.	Small intestines injected, especially cœcum.	Liver with many cicatrices.	.. ..	Seaman, ætat 40—died in 17 days.
160.	One mass of disease: mucous membrane swollen and gangrenous, with black patches of slough.	Healthy.	Healthy. ..	.. ..	Soldier, ætat 22, ill 18 days.

SUMMARY OF TABLE OF ACUTE DYSENTERY.

Thus in 160 cases of Acute Dysentery—

The liver is found to be altered in	84
to contain abscess in	21
is enlarged in	40
is gorged or turgid in	4
is small in	7
is pale in	26
is granular or nutmeg in	22
is soft in	12
is hard in	5
contains cicatrices* in	3

The gall-bladder appears to be almost always full, and to contain healthy or somewhat inspissated bile.

The ileum is noted as over-vascular or congested in	21
Slight ulceration and abrasion are seen in	3
It is in a state of sphacelus in	1
The stomach has its mucous coat over-vascular or somewhat softened in	4
and ulcerated in	1

The large intestine is ulcerated in all, and chiefly at the cœcum, sigmoid flexure, and rectum.

The cœcum, transverse and descending colon were free from ulceration in	3
It was perforated (generally in the cœcum) in	8
There was ulcerative destruction of ileo-colic valve in	3
Suppuration of appendix vermiformis (though not uncommon) is only recorded in	1
There is thickening and stricture of the intestine in	4
and dilatation in	1
The mesenteric glands are enlarged or inflamed in	17
The spleen is enlarged in	6
The kidneys are diseased in	2

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* These cicatrices do not appear to be the sequelæ of abscesses.

CHRONIC DYSENTERY RUNNING INTO DIARRHŒA.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		Remarks.
1.	Extensive ulceration of sigmoid flexure.	.. ..	Large abscess of liver.	.. ..	Ill 2½ months.
2.	Colon in a sloughy state : coats gave way on handling.	.. ..	.. ..	.. ..	Long suffered from dysentery.
3.	Lining of colon ulcerated throughout, greatest lesion at sigmod flexure and rectum, where ulcers were almost continuous.	.. ..	Liver enlarged, weighing 6½ lbs. attached to spleen by false membrane, substance soft : colour pale. Gall-bladder distended with green bile.	Spleen enlarged, indurated : mesenteric glands enlarged.	Invalid—died in 10 days of acute dysentery : supervening on chronic.
4.	Extensive ulceration of colon, orifice in sigmoid flexure, through which contents of bowels extravasated.	Slight attempt at inflammation of peritoneal surface.	.. ..	.. ..	Woman of 55—ill for six months.
5.	Intestines attenuated, several ulcers in cœcum and along arch of colon to sigmoid flexure. Ulcers in an atonic state : no raised edges, no increased vascularity.	.. ..	Liver small and unhealthy.	Congestion of mesentery : some enlargement of mesenteric glands.	Soldier, ill for 7 weeks out of and 115 days in hospital.
6.	Large intestines ulcerated throughout ; transverse colon thinner than natural : mucous membrane, had honeycomb appearance.	Stomach distended with air.	Liver dark, granular, with some congestion. Peritoneal coat puckered in various places : gall-bladder distended : ducts pervious.	.. ..	Soldier, admitted bedridden—died in 18 days.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		**Remarks.**
7.	Large intestines thickened and ulcerated, lined with pus.	Healthy.	3 abscesses in right lobe full of curdy matter.	.. ..	Pauper, ill several months—died in six days.
8.	Contraction of colon, general superficial ulceration of bowel: deeper of rectum.	Mucous surface of stomach abraded towards pylorus and an inch down the duodenum.	.. ..	Mesenteric glands enlarged.	Invalided for chronic dysentery—died after two months' treatment.
9.	Large intestine thickened and ulcerated throughout, cœcum nearly obliterated.	.. ..	Cicatrized fissure on upper surface, from 4 to 5 inches in length 4½ an inch deep. A large hydatid firmly attached to left lobe.	.. ..	Old Soldier, from Cabul.
10.	Large intestines contracted in several parts, ulcerated in patches of circular and irregular form from cœcum to rectum, which was in a state of slough.	.. ..	Liver healthy.	Abscess in cellular tissue between cœcum and psoas, which was dissected by it.	Portugese Doctor, ill 8 months.
11.	Large intestines ulcerated throughout.	.. ..	Pale and enlarged.	.. ..	Invalided for bowel complaint.
12.	Scirrhous thickening and ulceration throughout, but chiefly of rectum.	.. ..	Liver pale and granular.	.. ..	Pauper—ill 6 or 8 months.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		REMARKS.
13.	Whole cœcum and descending colon in sloughy state, transverse arch not much affected: rectum cartilaginous.	.. ..	Liver healthy. Gall-bladder empty.	Glands enlarged.	Pensioner, a long resident in India, had been in China : ill many months.
14.	Large intestine in state of slough throughout.	.. ..	.. ..	.. ..	Mate of Floating Light, æt. 24, ill 1 year.
15.	Cœcum rotten and perforated, transverse colon ulcerated, sigmoid flexure healthy.	.. ..	Abscess of liver communicating with ascending colon.	.. ..	Invalid, had been several weeks in hospital : discharged, but returned with fresh attack.
16.	Large intestines ulcerated and sloughing throughout.	.. ..	.. ..	Spleen greatly enlarged.	Young man, ill about 9 months.
17.	Cœcum thickened with villous coat, destroyed and like tanned leather : colon and rectum both much diseased.	.. ..	Gall-bladder gorged.	Effusion in abdomen.	Ætat 26, ill one year.
18.	Large intestine contracted, thickened and cartilaginous with fungous granulations.	.. ..	Liver pale and soft.	.. ..	Recruit, ill for one year.
19.	Colon adhering to stomach.	Small intestines glued to abdominal parietes & torn into shreds on separation.	Pale and small.	.. ..	Pensioner, ætat 40, ill 4½ months.
20.	Large intestines one mass of ulceration.	Healthy.	Pale and gritty.	.. ..	Ætat 62, ill some months —female.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		REMARKS.
21.	Large intestines lined with fungous granulations, and calibre of gut in places contracted to size of finger.	Much attenuated.	Yellow, hard and granular.	.. ..	Seaman, ætat 40, ill three months.
22.	Hæmorrhage external to bowels, which were purple internally, with little ulceration.	.. ..	Liver cirrhosed.	Mesentery and meso-colon full of effused blood: spleen greatly enlarged.	Ætat 44, broken down—drunkard, died suddenly on close stool.
23.	Large intestine ulcerated throughout.	Healthy.	Pale. ..	.. ..	Soldier, ætat 25. Ill many months.
24.	Large intestines slightly ulcerated, some thickening of cœcum.	Healthy.	Liver double its natural size, like a coagulum of blood: nine small abscesses containing 3 or 4 ozs. of pus.	.. ..	Invalid, ætat 31—many months ill.
25.	Large intestines with patches of rather superficial ulceration, and of dark red discolouration.	Healthy.	Healthy. ..	.. ..	Ætat 27: 75 days ill—complicated with secondary syphilis.
26.	Colon not much thickened, extensive patches of ulceration and spurious granulations.	Pale. ..	Pale. ..	.. ..	Seaman, ætat 27—ill 5 months.
27.	Large intestine ulcerated at cœcum, effusion of grumous matter on its surface, and dotted with spots of ulceration throughout.	.. ..	Healthy. ..	.. ..	Ætat 34, ill 5 months.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		REMARKS.
28.	Internal surface of colon ulcerated and abraded throughout: not much thickening of coats.	Healthy.	Healthy. ..	.. ..	Ætat 33—ill about 3 months.
29.	Large intestines purple outside, inside quite gangrenous, with those lichenoid excrescences or abortive cicatrization ?	Healthy.	Healthy. ..	.. ..	Soldier, ætat 34, ill many months.
30.	Coats of large intestine extensively ulcerated, especially cœcum and rectum.	.. ..	.. ..	Mesentery vascular, glands enlarged.	French Sailor, ill 3 months.
31.	Extensive ulceration, coats black, and in state of sphacelus.	.. ..	.. ..	.. ..	Ætat 26, ill 2 months.
32.	Much thickened, inner coat livid and ulcerated.	Coats of stomach vascular, and abrasion of coat of small intestines.	.. ..	Mesentery injected, glands swollen, with some hydatids in them.	Pensioner, ætat 46, ill 8 months.
33.	Purple inside, with superficial ulceration throughout.	.. ..	Immensely enlarged, granular, with white patches on upper surface: cicatrices.	.. ..	Soldier, ætat 23, ill some months on voyage out.
34.	Thickened, with a few ulcers—and general vascularity of mucous coat.	.. ..	Healthy. ..	.. ..	Ætat 31, ill 3 months.
35.	Coats thin and friable, extensive ulceration throughout.	.. ..	Enlarged, large abscess on lower surface of right lobe.	Glands swollen.	Ætat 22, ill 7 weeks.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		Remarks.
36.	General ulceration and thickening.	Coats of stomach vascular.	Liver full of abscesses, large one in left lobe. Gall-bladder unusually large.	Mesentery vascular, glands enlarged.	Ætat 30, ill 3 months.
37.	General ulceration and thickening, especially of cœcum and rectum.	.. ..	.. ..	.. ..	Ætat 28, ill about 3 months.
38.	Large intestines lined with bloody tenacious matter.	.. ..	Liver small and hard.	Pancreas small and hard, omentum and mesentery discoloured : latter nearly black: glands were rather enlarged.	Ætat 63, ill 2 or 3 months : passed 2 or 3 pints of blood every day.
39.	A good deal of ulceration of large intestine.	Stomach healthy, ulcer at the pyloric orfice, where there was cancerous ulceration.	Healthy. ..	.. ..	Sailor, æt. 40, says he had been ill 3 months—died in 16 days.
40.	Patches of purple discolouration on inner coat.	Pale. ..	Early stage of nutmeg degeneration.	.. ..	Seaman, ætat 40, ill some months—died with odd head symptoms.
41.	Attenuated, not ulcerated.	Mucous membrane of stomach softened throughout : towards pylorus abraded and rough.	Pale. ..	.. ..	Has secondary syphilis.

No.	*Large Intestines.*	*Stomach and small intestines.*	*Liver and Gall-bladder.*		REMARKS.
42.	Internal surface of cœcum covered with a red efflorescence, some spots of ulceration in the colon. Descending colon and rectum contracted, thickened and cartilaginous.	Intestines generally glued together.	Liver natural, contents of gall-bladder pale.	Glands enlarged and livid.	Invalid, ill long time.
43.	Towards sigmoid flexure a few patches of ulceration.	Congested ecchymosed state of pyloric orifice, coat partially abraded—this extending to duodenum—congestion of ileum: bowels on whole softened, œdematous, and tearing readily.	Small particles like tubercular matter, on surface of liver.	Glands enlarged.	Ætat 36—ill some five weeks.
44.	Rectum in scirrhous state, with ulceration extending up to sigmoid; patches of ulceration in transverse colon and ileo-colic valve.	Ulceration extending some inches up the ileum.	Liver hard and nutmeg.	Glands enlarged and diseased.	Old Seaman, 3 months ill.
45.	Spots of ecchymosis on descending colon.	Small intestine thickened, in lower portion some ecchymosis.	Liver small: flaccid gall-bladder.	Mesenteric glands enlarged and injected.	Diarrhœa after cholera—died in five weeks.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		Remarks.
46.	Large intestine pale externally, slight ulceration inside.	Pale. ..	Liver rather pale.	Mesenteric glands enlarged.	Invalid, ill many months.
47	Throughout thickened and cartilaginous, at the arch and sigmoid flexure surface irritable.	Stomach distended with bilious fluid : small intestine doughy.	Liver small and pale. Gall-bladder full of dark bile.	Mesenteric glands enlarged, spleen large.	Invalid : long ill.
48.	Large intestine pale, and so much contracted as scarcely to admit of the introduction of the blades of a pair of scissors : destitute of lubricating mucus, with red efflorescences towards rectum.	Small intestines extremely attenuated and transparent.	Dark. ..	.. ..	Soldier, from China. Ætat 20—ill four and a half months.
49.	Considerable chronic inflammation of mucous coat of large intestine. Coats a good deal thickened : no deep ulceration.	Chronic inflammation of mucous coat of stomach and small intestines.	Healthy. Gall-bladder full.	Mesenteric glands atrophied: spleen and pancreas small.	Ætat 30—about six months ill.
50.	Some ulceration of large intestines.	Healthy.	Small dark surface, studded with spots of organized lymph.	.. ..	Ætat 36—2 years' standing. Complicated with lungs.
51.	Colon and rectum contracted, dry and cartilaginous, external surface superficially ulcerated.	.. ..	.. ..	.. ..	Soldier, ætat 43—ill 7 months.

No.	*Large Intestines.*	*Stomach and small Intestines.*	*Liver and Gall-bladder.*		Remarks.
52.	Large intestines pale and blanched, otherwise healthy.	Coats of stomach bloodless: small intestines pale.	Liver yellow, mottled or nutmeg.	.. ..	Invalid, ætat 53, had been drinking—much bilious vomiting: ill 3 or 4 months.
53.	Large intestines congested and abraded throughout—no deep ulceration.	Small intestines congested: and mucous surface abraded partially.	Healthy. ..	.. ..	Seaman, ætat 18—ill 3 months.
54.	Pale and bloodless.	Pale and bloodless.	Light yellow colour, slightly enlarged.	.. ..	Half starved Seaman—ætat 43, ill 2 months.
55.	Pretty general ulceration of superficial kind.	.. ..	Small and contracted from former inflammation.	.. ..	East Indian, ætat 59, ill many months.

SUMMARY OF TABLE OF CHRONIC DYSENTERY.

In 55 cases of chronic dysentery—

the liver was altered in	31
abscess was found in	6
hydatids in	1
cirrhosis in	1
enlargement in	5
diminution of bulk in	8
nutmeg alteration in	6
it was pale in	11
it was hard in	4
soft in	1
contained cicatrices? in	1

The gall-bladder and its contents seem generally to have been healthy: the bile occasionally rather pale coloured, but at other times the reverse.

The large intestines were ulcerated in	50
the colon contracted in	3
cœcum nearly closed in	1
colon perforated in	1
The stomach is noted as unhealthy in	6
There was chronic inflammation and softening in	2
increased vascularity in	2
abrasion of pylorus in	3
cancer of pylorus in	1
The small intestines are noted as unhealthy in	12
Ulceration or abrasion of ileum in	3
Mesenteric glands enlarged in	16
The spleen was enlarged in	4

As no distinction can be drawn between acute and chronic dysentery, which is not, to a great degree, arbitrary, so chronic dysentery and diarrhœa are divided by no marked line. The last 15 cases belong rather to diarrhœa than dysentery, and it will be observed, that in them the large intestine is paler than natural, and in several instances not ulcerated, and that in no instance was there abscess, though the liver was found altered in 11 out of 15 cases.

CHUSAN DYSENTERY.

Although a great many patients died in the General Hospital from Chusan dysentery, these cases are excluded from the preceding tables,—1st, because they are instances of a form of malarious dysentery, which is very different from the common disease of Bengal,—And 2nd, because ulceration of the large intestine, of a true dysenteric character, though sometimes met with in China, seems chiefly to have supervened after the patients arrived in Bengal. But the mortality from it was so great, and it was altogether so unmanageable a form of disease, that the accompanying abstract of the pathological appearances in those who died soon after their arrival in Bengal is worthy of being preserved.

Large Intestine.	*Stomach and small Intestine.*	*Liver and Gall-bladder.*	*Mesentery, &c.*
Generally attenuated, now and then inflammatory blush: in further advanced stage some ulceration.	Attenuated: rosy hue of pyloric orifice, some roughness at commencement of duodenum: frequent abrasion and softening of mucous coat of jejunum and ileum, ulceration of glands of Peyer.	Liver healthy or pale: gall-bladder full of fluid bile, often flaccid: bile pale and limpid.	Mesenteric glands always enlarged, containing curdy, scrofulous like matter: spleen sometimes enlarged.

Chusan differed from Bengal dysentery chiefly in these respects: in its setting in with much fever, which here is very unusual; in the slight degree in which the liver and large intestine were affected; and the great amount of mesenteric disease and affection of the small intestines. In many respects it resembled Cabul dysentery, which the men called "the white flux," especially in the general absence of blood in the motions.

COMPARISON OF ACUTE AND CHRONIC DYSENTERY.

On a general review of the appearances presented in cases of acute and chronic dysentery, it would appear, that the liver is most frequently altered in the latter: that abscess is about equally frequent in either form—that in acute dysentery the liver is frequently enlarged and soft, while in chronic it is more generally small and indurated.

The stomach and small intestines also suffer more frequently in the chronic form, and the mesenteric glands are more frequently altered in it.

The extent of disease in the colon is least in the cases bordering on diarrhœa, and whereas in 160 cases of acute dysentery the large intestine is perforated 8 times, in chronic it was only once in 55.

Nothing very distinct can be said about the gall-bladder or its contents, but in the acute form it appears to be generally healthy, although often loaded with inspissated bile; while in the most chronic form bordering on diarrhœa the gall-bladder is often flaccid, and its contents pale and fluid.

The proportion of hæmorrhagic cases is smaller in the chronic than in the acute form.

Enlarged spleen is perhaps more common in the chronic form, but this is to be looked on as an accidental complication. No occasional mention of the state of the pancreas or kidney is of value, as they are certainly not implicated in the disease.

TRUE DESCRIPTION OF THE CHANGES PRODUCED BY BENGAL DYSENTERY.

It is not my intention to enter into any minute description of the state of the intestines, which has been faithfully described by both Twining and Raleigh, nor am I able to throw any fresh light on the nature of the dysenteric process. It has been compared to erysipelas by Siebert, and to the corrosion of mineral acids by Cruveilhier and Rokitansky. The mechanical theory of the irritation of scybala or accumulation of fæces acting on an inflamed surface, though generally abandoned, still finds some supporters. It has by many been attributed to the irritation of altered biliary secretion, or to its absence. Parkes considers it to be a process of ulceration universally commencing in the solitary glands of the large intestine. Others, with Raleigh, consider it to be a simple inflammation of the mucous coat of the large intestine, (if it were simple it would be more amenable to treatment). Whatever of truth or error there may be in these opinions, the appearance presented to us in simple Bengal dysentery is, that of an inflammation of the large intestine, which may be diffusive, ulcerative, purulent, hæmorrhagic, or gangrenous, according to circumstances. The disease in Europe and in India is essentially the same, and the best scientific descriptions of Bengal dysentery are those given by Dr. Baly of London and Rokitansky of Vienna, although the latter has not met with the amount of ulceration, which is common here. As seen here, the process is very generally one of mortification and sloughing, not of simple ulceration, i. e. the ulceration is often secondary, and occurs only after the sloughs are thrown off. Inflammation and ulceration of the solitary glands is very unusual, or has been very carelessly observed, and I believe it may be stated generally, that in Bengal dysentery, they are not peculiarly or primarily diseased. It should be borne in mind, that the state of the solitary glands, as observed by Murray and Parkes, exactly corresponds with their usual appearance in cholera, and that all Murray's and most of Parkes's cases occurred in dysenteric patients suddenly carried off by that disease.

FREQUENCY OF COMPLICATION WITH DISEASE OF LIVER.

Perhaps I may as well offer a few remarks on the frequency of the occurrence of disease of the liver in connexion with dysentery. Our information on this subject is very meagre, as few observers have recorded any change of structure in the liver except that of the formation of abscess.

On the continent of Europe, Broussais, Gueretin, Thomas, Siebert, and Rokitansky, some of whom have written at great length on the pathology of dysentery, do not, as far as I can learn from abstracts of their writings, allude to hepatic complications. In the miasmatic form of dysentery, abscess is very unusual: it was rarely observed in the Continental wars of the 18th century* and in the Peninsula—not at all in various Austrian epidemics or in the Penitentiary. In the Burmese war, Waddell says he never saw any structural lesion of the liver. In China, Dr. Wilson found abscess only twice in 61 fatal cases. The only exception to this general rule seems to be Ireland, where Dr. Cheyne found it four times in 30 cases; but again Dr. Mayne never met with it.

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* Pringle however found abscess in 2 out of 5 cases, of which he gives dissections, but elsewhere says that the liver was generally healthy.

The following data are sufficient to confirm the opinion, that abscess of the liver is a much less frequent complication of dysentery in Calcutta, than in Bombay or Madras. The reason I am not prepared to explain: but assuming, what there is every reason to believe, that abscess co-existing with dysentery is rare in the miasmatic form, and common in the other—that it is more common in the other presidencies than in Bengal, (where dysentery itself prevails so extensively in its worst shape,) and that it may be common one season and rare the next, it naturally follows, that some far more general cause must determine the formation of abscess than the limited one, of the absorption of pus from the ulcerated surface of the colon, or from suppurating mesenteric glands, assigned by Dr. Budd.

In New Orleans Dr. Robertson found hepatic abscess the common cause of death in dysentery.

In Madras, Annesley ..	.. in 51	cases finds	26	abscesses.
Dr. Shanks	.. in 96	..	36	„
Parker and Innes	.. in 61	..	13	„
Ballingall ..	.. in 35	..	4	„
At Bombay, Dr. Morehead	.. in 30	..	12	„
At Calcutta, Seaman's Hospital*	in 24	..	5	„
Medl. College Hospital*	.. in 54	..	14	„
Genl. Hospital ..	.. in 215	..	27	„

It is however worthy of remark, that the liver has been found in the General Hospital to have been altered in 118 out of 215 cases: in the Medical College Hospital in 13 out of 30 cases, while Sir James MacGrigor found it in India altered 16 times in 22 cases, "and in Egypt as in India found it diseased." In the Peninsula the liver was found generally healthy, but sometimes indurated and softened and sometimes the seat of abscess. In Dublin Dr. Mayne says, it was always healthy, but sometimes congested.

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* If these cases were minutely examined, I think that the number of cases of abscess would be somewhat less.

While on this subject, I may add, though not prepared to enter on the question of the connexion between liver disease and dysentery, that, on analysing 46 cases in the General Hospital, returned as hepatitis and terminating in abscess, the large intestine was found ulcerated in 15, and the small intestine in parts over-vascular, or with its mucous surface abraded in 4:—14 patients had been suffering for sometime from dysentery, and 41 had been ailing for a week or two before admission.

Simple acute inflammation terminating in abscess would therefore seem to be comparatively unusual in this part of India, though I am unacquainted with what is termed duodenal dyspepsia by Dr. Parkes, and which he considers to be the usual precursor of abscess.

I would also venture here to intimate a doubt, whether the occlusion of the duct from enlarged glands of the capsule of Glisson, or inflammation of the gall-bladder in new arrivals, as described by Twining, be at all of common occurrence.

ON CERTAIN APPEARANCES MENTIONED BY AUTHORS.

Ere concluding, I would offer an observation or two on various appearances which have been described by authors. Scybala or accumulations of fæces appear to have been scarcely ever observed, during life, and never after death.

No sloughs of complete portions of the intestinal canal have been remarked, but during life large, tough, tubular portions of mucous membrane and effused lymph have come away frequently, and no doubt they are occasionally found in situ.

Ulceration of the ileo-colic valve is probably more frequent than it is represented in these tables to be, but no such thing as intus-susception of the small into the large intestine has been witnessed.

The appearance described by MacGrigor, as fungoid or lichenoid excrescence of the colon, is common enough.

No suppuration of the mesenteric glands or occurrence of pus in the vena cava, have been met with.

Displacements of the large intestine are frequent, but have not been noticed with sufficient accuracy; however they are of slight practical importance.

The same must be said of adhesions and matting of the omentum.

The *lumbricus teres* is often found, especially in patients who have come off a long voyage.

Cicatrization of ulcers, which Raleigh considers so unusual, is far from infrequent.

The pouring out of blood in immense quantities from the commencement of the disease, as described by Twining, and stated to be very rare at Bombay by Morehead, occurred in 19 out of 160 acute cases.

On the subject of spasm of the intestine, post mortem examination throws no light.

CONCLUSION.

Were it not my object to make these remarks as short as possible, I should like much, to append the history of some of the most interesting cases, for instance of two or three cases of what has been clumsily termed perityphlitis, or abscess in the cellular tissue round the cœcum, of a case carried off by cholera, just after the process of cicatrization, marked by a dark coloured deposit, had been completed, of various hæmorrhagic ones, especially an instance in which hæmorrhage from the bowels was preceded by epistaxis and hæmoptysis, and most of all, a fatal case complicated with odd tetanic symptoms, the only one I have met with, which corresponds at all with the nervous symptoms described as occurring in some of the cases at the Penitentiary.

NOTES.

1. Having alluded only very cursorily to the subject of treatment, I may be allowed to add that, after greatly increased experience of the disease, the opinions expressed by me in former years in the following extracts, still appear to me in the main just. Possibly, the value of the use of sugar of lead in practice among Europeans may be over-rated, and others do not speak so well of it, but English authors have never placed so much confidence in it as American and German ones. After all, our practice in bad dysentery is very unsatisfactory, and quite a contrast to that in fever :—would that other diseases were as manageable as the latter! The approximate percentage of deaths in the General Hospital will shew, that except in bad seasons, and when cases are brought in late, the mortality from it is small.

1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
6.09	5.2	3.8	2.1	4.	10.4	6.	6.2	2.9

“It cannot admit of doubt, that calomel and drastic purgatives have been injudiciously used, and that a return to a milder mode of treatment will be attended with the most beneficial results.

There is no difference of opinion as to the propriety of free depletion in the earlier stages of this disease, followed up by the use of mild purgatives, among which castor oil is quite invaluable. The combination of blue pill, ipecacuanha, gentian and hyoscyamus, so commonly employed, is a most useful preparation, and opium is also a very important remedy, although the belief that it merely masks the disease is very prevalent. An opiate enema, or Dover’s powder, may, in most stages of the disease, be most usefully administered. In the dysentery of children, no medicine exceeds in value the Hydrarg. c̄ Cretâ, combined with other remedies.”—*Med. Gazette, June* 25, 1841.

“As the incipient stage is usually past before men are sent to Hospital, general depletion and the means commonly applied to check the onset of the attack, are often inapplicable. Indeed, as dysentery is essentially an inflammation of a mucous not of a serous surface, it may be doubtful whether local be not often as effectual as general depletion. As to the use of calomel, which is so commonly employed at its onset, the general feeling of the profession seems to be against its employment at a later stage, and indeed it is difficult to conceive what beneficial influence it can exert on an ulcerated surface.

The usual practice in the Seaman’s Hospital is the free exhibition of sugar of lead and opium, and it appears to answer well, and has never produced those disagreeable constitutional effects which are attributed to the use of the preparations of lead. As much as from nine to fifteen grains of sugar of lead, combined with small quantities of opium, (one-half or a whole grain of opium to three of sugar of lead) are given within the twenty-four hours, and this treatment is continued for several days, along with the free use of leeches and opiate and sugar of lead enemata, with purgatives every other morning and milk diet. This mode of treatment has been tried very extensively among natives, and appeared to be very efficacious and convenient, as avoiding the chance of salivation. It would seem to be peculiarly adapted to that insidious form of hæmorrhagic dysentery, supervening on chronic disease, of which several cases have of late occurred in middle aged men, characterised by the pouring out of immense quantities of blood from the mucous surfaces, indeed compared by some to uterine hæmorrhage. But we do not advocate any exclusive mode of treatment, or assert the superiority of sugar of lead over various other remedies, and of course, after the dysenteric symptoms have begun to subside, various alteratives are useful in aiding the bowels to regain their healthy tone."—*Seaman's Hospital Report for* 1844.

2. As the number of autopsies in cases of dysentery, occurring in children at the General Hospital, is extremely small, and as no such case is included in the preceding tables, I add the post mortem appearances, in a case lately treated by my colleague Dr. Cantor, and obligingly communicated by him to me. It will be seen that the case was one of simple ulceration, without any sloughing ; also that the ulcers were uniformly diffused along the mucous membrane, and that the solitary glands of the cœcum were not specially implicated ; the process of ulceration was still going on, and that of reparation had not commenced at any point.

Child ætat. 4—ill for 3 weeks, death preceded by convulsions.

Large intestine studded throughout with equally diffused ulcers. The earliest stage of the ulcer was a raised white point, with greyish contents, (enlarged mucous follicle ?) which enlarged and ulcerated, destroying the mucous membrane. The ulcers varied in size from a pin's head to a sixpence, and had raised margins of a white finely fringed appearance. The cœcum and rectum were somewhat thickened : appendix vermiformis studded with numerous minute grey points. There were nine lumbrici in the large intestine.

The small intestines were healthy, slightly injected here and there.

Liver somewhat small. Spleen healthy.

There were clusters of enlarged mesenteric glands, and some single ones enlarged, while others were natural.

APPENDIX.

Use of large Enemata in Dysentery.

1. *Out of India.*—With the use of enemata in dysentery, the profession has been familiar, at least since the days of Celsus. That author recommends various soothing and oleaginous injections. And to come to more modern times, Sydenham used not merely small opiate clysters, but enemata of ½ lb. of milk. In the systematic use of these three or four times daily, he had the utmost confidence, although he remarks, that really bad dysentery, with much structural change, will not yield to clysters, whether purgative, astringent, or emollient. Böerhave exhibited emollient clysters three or four times daily.

It would be tedious to enumerate the different authors who have recommended particular enemata in this disease. As fashion has varied, they have been in high repute, or fallen into comparative disuse. The French especially have been fond of their lavements and demi-lavements, and have thought them peculiarly efficacious in the commencement of the disease. And of late years, in the dysentery of children, Trousseau strongly urges the employment of enemata of nitrate of silver of 8 or 10 oz., to be thrown up in a child of two years old with the long tube, after the bowels have been washed out with a common warm water lavement. All these enemata were meant to act on the ulcerated surface of the colon, and all authors seem to have believed that with a syringe used in the common way, injections may be made to pass up as far as the ileo-colic valve,—and recently, Boudin states, that he has had positive evidence of such enemata passing beyond it.

Some twenty years ago, O'Beirne proposed the introduction of a long tube above the sigmoid flexure, (on the idea of its often being the seat of spasm,) to clear out the intestinal canal more effectually, and published two cases of dysentery which he had cured by it, and at a later period a third one. Whether his plan has been acted on in England, where the disease is rare, I am unable to say, but in 1840, Dr. Symonds (Library of Medicine) calls attention to the practice, and in Ireland, where epidemics of it are still not unusual as in former centuries, and where there must have been free scope for its use, it seems not to have been employed.

The chief novelty of late years appears to be the use of injections of water and the albumen of eggs by Mondière. He injected this mixture thrice daily, and by his own account, with wonderful success. All writers, however, with the exception perhaps of O'Beirne and Mondière, seem to have regarded enemata only in the light of most useful adjuvants.

2. *In India.*—To turn to tropical dysentery, it would be difficult to find an author who does not recommend enemata in one shape or another. In 1639, Bontius our first writer is found using them,—in 1783, Mathews advises their employment "for sheathing the bowels and obtunding the fluids." He gives clysters of bark to support the system, or of tobacco to clear out the bowels, and these he administers through a hookah snake. With so formidable an instrument it seems probable that his enemata were large. Since his day, I imagine that few practitioners have failed to have recourse to clysters, small when opiate, and of about one pint in bulk, when meant to act generally on the surface of the bowel.

Sir James MacGrigor, for instance, in the beginning of the century, records the employment of almost every possible variety of them.

In 1837 Dr. Jackson, of H. M. 6th Regt., (a great advocate for the employment of clysters in ordinary constipation, and who recommended six pints to be usually thrown up), mentions having passed up the long tube 15 inches beyond the anus in a fatal case of dysentery.* Large enemata of tepid water, and the injection three times daily of a pint of water with nitro-muriatic acid, are frequently recommended by Madras writers some ten years ago; and in 1840, the officiating editor of the Madras Journal mentions, that he has often, in dysenteric cases, pursued O'Beirne's plan, and given wonderful relief with large emollient enemata.†

Enemata of various sorts have been constantly used in Bengal. Acetate of lead seems to have been always a favourite. Twining used it often; and up to 1840, Mr. Raleigh employed it largely in the General Hospital, and believed that with a pint and a half of fluid he covered the surface of the large intestines: these injections he repeated every 2 or 3 hours in hæmorrhagic cases.

In the end of the year 1847, Mr. Hare again invited attention to O'Beirne's method, and to the systematic use of large enemata. He thinks that they have not been hitherto used in sufficient bulk or with sufficient frequency, and he endeavours to assign to them a position of primary importance in the treatment of dysentery. He seems with Jackson to have arrived at a maximum of six pints. He believes "that he may save the lives of hundreds who die under the present system," which he considers to be commonly salivation, and hopes to produce quite a revolution in practice. Various medical officers have since published cases of the successful employment of large enemata, chiefly in chronic dysentery.

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* "No one has thought of making use of this method."—Mr. Hare on Dysentery, p. 14.

† This mode of treatment ought to have been noticed and applied in India. —Hare, p. 7.

To raise them into this new position of independent value, it appears to be necessary that we should have a series of bad cases of dysentery treated successfully by the long tube, unaided by the various other modes of internal treatment.

Whether Mr. Hare's zeal and energy will be able to elevate them to this new rank, or whether the long tube will share the fate of the long-forgotten hookah snake of Mathews, it is for the experience of future years to determine, for like other remedies, injections vary in efficacy in different seasons and in different forms of the disease. Of great value as injections are, they certainly produced no diminution of mortality in the years, in which they were employed in the General Hospital most frequently and in largest quantity, namely, in 1848 and 1849: and the consideration of their past history does not encourage the hope that they will ever permanently retain a position higher than that of most useful adjuvants. The large ones can be used systematically only in Hospitals, and are never likely to become favourites in private practice.

Use of Quinine in Remittent Fever.

An apology may be deemed necessary for collecting at this time of day, evidence in favour of the free use in remittents, of one of the very few specifics we possess in the whole circle of the materia medica. Yet it is possible, that some may not have had the opportunity of carrying their investigations on the subject further than my friend Mr. Hare, who thus expresses himself: "I have searched every where indeed, and all that I can find in books and Magazines since Johnson's time till now is, bleed and give large calomel purgatives, but be very careful not to give quinine too soon." *Hare on Fever,* p. 13. To such readers the following information may be interesting from its novelty, and to others perhaps, as being a connected historical sketch of the use of quinine in remittents in India. After all, the use of quinine in remittents is merely an extension of its use in intermittents, and in either case, only a substitute for the older treatment by bark; but to trace all this would lead us into still further details, while I fear that even the following brief recital of facts may be tiresome to many.

1. *Out of India.*—In the year 1835, M. Maillot published a work on the fevers of Africa, and states that, by the exhibition of quinine he reduced the mortality in bad remittents from 1 in 3½ to 1 in 20. He gave it without any reference to the stage of the fever, and in bad cases he gave from 1 to 2 scruples by the mouth, and a drachm as an enema. In this manner he in several instances gave as much as 148 grs. in 24 hours.

The following extract from Bouchardat's Materia Medica, published in 1839, will show the state of European opinion and practice at that period. "In bad remittents the salts of cinchona save the patient from certain death. In these cases we must act much more rapidly, and augment the doses. We must then, according to Torti, administer the bark on the first sign of remission, for there is often no intermission. Bretonneau goes still further: he commences the exhibition of bark in the middle of the paroxysm, and is not afraid of increasing the intensity of the access during which it is given; for experience shows, that the medicine does not commence to act till several hours after it has been administered, i. e. during the remission. Bretonneau used bark, but we now greatly prefer quinine, which is more quickly absorbed, and acts more rapidly. We prescribe 30 grs. of it with 1 gr. of opium, and give it in 3 doses. From the moment that the access has been prevented or moderated, it is no longer necessary to give it in these large doses, but we may continue to give smaller ones for some days."

Dr. Hille in Casper's Wochenschrift in 1839 mentions, that quinine is the only medicine for the intermittents and remittents of Surinam; and in 1842, writing in more detail, says, it must be given in 12 to 40 gr. doses in all stages.

The American physicians seem to have been somewhat slow in following their Continental brethren, and although quinine was given in yellow fever at New Orleans in 1839 in scruple and scruple and a half doses,* I believe that Dr. Byrne (Boston Medical and Surgical Journal, July 1845) is the first who talks strongly in favour of quinine in remittents. "He found that quinine might be used with the greatest advantage even in the hot stage. As regards the dose, he observes, that in ordinary remittents it is a matter of indifference what dose is administered, provided 10 or 20 grains are introduced into the system a certain number of hours before the paroxysm. In severe cases, there is no longer any choice; but the quantity above specified should be given in 1 or 2 doses at most. We thus find, that by the middle of the year 1845, the use of quinine in large doses, without much reference to the stage of the remittent, was fairly established, and the year 1846 produced papers by Drs. Tuck, Upsher, and Professor Van Buren, and the year 1847, by Holmes,† all recommending the practice. It is unnecessary to allude to writers of later date.

In India.—The free use of quinine in remittents appears to have been slowly and cautiously adopted, and this invaluable medicine seems on the whole to have been more extensively used in Madras than in the sister presidencies. Some of the earliest notices on the subject are the following: Dr.

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* Mr. Hare alludes to this, p. 15.

† Mr. Hare mentions Mr. Holmes, page 14.

Geddes in 1828 mentions giving quinine with the pulse at 108, and after extensive use of it, he in after years announced, that he preferred giving it in every instance to affecting the mouth with mercury. In 1833, Corbyn treated a bad remittent fever in Calcutta with most gratifying success, and says, that his routine practice was, six or seven hours after the administration a purgative to exhibit 7 or 8 grs. of quinine, and to continue this steadily every four hours without reference to paroxysms. He seems to have produced giddiness and deafness frequently. In 1834 Dr. Wright, in the Goomsur country, gave the sepoys 20 grs. daily, but used to watch for remissions: in 1835, Mr. Eyre gave it in the same country often in scruple and a half doses, of which the Superintending Surgeon disapproved; and, the supply of quinine running short, Lord Auckland sent down a supply of 20℔s. at his private expense,* when every one who could get quinine, employed it with an unsparing hand, and I believe with very little regard to remissions.

In 1835, Twining, in the second edition of his book, strongly recommends it in remissions; and Goodeve in 1837 says, that it has produced quite a revolution in practice, having almost brought back the days of bark: still he waits for remissions. In 1840 Mr. Green recommends its free use in remissions, and the Madras Journal of the same year calls attention to Maillot's large doses. In this year also, Dr. J. Murray, writing of the Malwa sweating sickness, says, there were few conditions that would prevent his giving quinine; that he was not deterred by headache, but if it were violent, he would use other measures previously. In 1841, Mr. Martin writes, "when the remissions are well marked, quinine should be given without waiting for every thing; if we wait for every thing, we shall often wait till it is too long or too late." In 1842, Dr. Bell in Persia gave quinine in small doses without any reference to the stage of the fever, and in the same year the recorded practice in the General Hospital at Madras was as follows: "Quinine is given in 5 gr. doses every hour on the least tendency to remission, or change, however slight. No bad consequences, nor any aggravation of the symptoms, have been observed, even after it has been continued throughout the greater part of the exacerbation."

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* For this information I am indebted to Mr. Surgeon General Stiven.

In 1843, Dr. Morehead expressed himself thus clearly regarding the use of quinine in remittents at the General Hospital of Bombay: "I think that even in cases where the remission is very imperfect, quinine should be tried, and repeated or not according to the effect." "Should the remission be distinct, dryness and brownness of the tongue offer no drawback to the use of quinine." "I do not think the presence of the phlogistic diathesis or the presence of fixed congestions of necessity contra-indications to the use of quinine." "We are frequently, it is feared, induced to intermit the remedy, because a febrile exacerbation may have followed after its use in the first or second remission, under the apprehension, that the febrile excitement has been produced by the remedy," "but we have no sufficient grounds," &c. In this year also, though he waits for a remission, MacGrigor talks of the paramount importance of keeping off the next paroxysm. About the same time the present writer published a case in which quinine was successfully administered during grave cerebral congestion, notwithstanding the presence of a black tongue and sordes about the teeth; and in 1844, in the report of the Howrah Seaman's Hospital, he attributes the great reduction of mortality from the 8 per cent. of preceding years to 1.7 in one year, and to 0 per cent. in the next, or no death in 127 cases, to abstinence from free venesection and the early use of quinine, always making allowance for what the Germans call the "Genius epidemicus morborum." In the same year, Eveleigh in the Calcutta Journal mentions his having employed quinine in severe cases, in which the head and the liver were affected.*

Meanwhile, quinine was becoming more extensively used, and especially in parts of Madras. In the bad remittents in Goomsur it was given in very large doses, and the Government supply of quinine did not equal the demand. It used even to be reported facetiously, that the Madras Board had recommended the appointment of a Special Superintending Surgeon to controul the extravagant expenditure of quinine. In 1845, the Bengal Medical Board was applied to, and liberally sanctioned a small extra supply for the Hill Agency, but very many ℔s. were procured from private sources at the expense of the Agent. Mr. Cadenhead regularly and constantly used it in the hot stage of fever, from the commencement of the year; and at the request of the Editor of McClelland's Journal, began to write a paper on the subject, which, owing to the distraction of political duties, was never finished. There was a regular schism among the practitioners in the Northern division regarding the stage at which it should be given; in short, the most impartial account of the state of the question at this time is given by Dr. Williams, of St. Thomas, writing in the same year. After alluding to the use of large doses of quinine in India and in various parts of the world in remittents, he remarks: "The battle still rages between those who would treat this disease symptomatically, and those who prefer the specific remedy."

Two years after this, or towards the close of 1847, Mr. Hare published a pamphlet, in which he most strongly advocated the use of quinine from the commencement in all miasmatic fevers. He advises its administration without any reference to the stage of the fever, and his specific directions are chiefly the same as Mr. Corbyn's treatment of the fever of 1833. Since then, Dr. Macrae of Howrah has published an account of many cases of fever treated similarly: this mode of treatment he has pursued since the middle of 1847, as shewn by the records of the Seaman's Hospital; and Dr. Ford of Madras states, that he has been following a similar practice since the year 1845, as testified by his reports to the Medical Board.

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* "This is the only approach to the truth I can find."—Hare, p. 12.

By this time pretty abundant evidence had accumulated on the subject, and I do not know that any more recent has been submitted to the profession in Bengal. A paper by Dr. Cameron of Ceylon, advocating the same views, has since appeared, but I have not seen it.

To the enquiry, what has been established by all these facts regarding the free use of quinine in tropical remittents during the last twenty years, the following would seem to be the natural reply.

It admits of no question, that the free and early employment of quinine in remittent fever is a great step in advance in practical medicine, and it is also important to know that there is no necessity for extreme caution in its use, but the late Dr. Williams, as already quoted, describes the state of the case correctly. It remains for practitioners to adopt the symptomatic or the specific mode of treatment: or a mixture of both, which may be termed the ecclectic. Much must of course depend on the intelligence and experience of the individual, on the circumstances in which he may be placed, and on the character of the fever which he may be called on to treat. No practice should be indiscriminate, for such treatment is never scientific, and is not always safe.

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